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# Financing port development

*Report by the UNCTAD secretariat*

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***Annex***

Glossary of investment terms


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## FOREWORD

(i) This report was prepared in response to the recommendations made by the Intergovernmental Group of Experts on Ports at their meeting of 1993 and endorsed by the Standing Committee on Developing Services - Shipping, to undertake an analysis of the financial aspects of port management. Other reports have dealt with the principles of port administration, organization and management and the use of modern management techniques (strategic planning, marketing, strategic pricing). The overall aim is to help ports to face successfully the challenges posed by changes in trade and transport. This is a topical subject with far-reaching implications, as a recent survey carried out by the International Association of Ports and Harbors (IAPH) found that one of the major concerns of port managers was the financing of port facilities. In both developed and developing countries, fiscal crises exist at the local, state or federal level and, at the same time, there is a need for ongoing investment if facilities are to keep up with the growth in trade and provide the services required for efficient international transport.[1] Therefore, this report concentrates on the financing of port development.

(ii) In the past, ports have depended on municipal, state or national funds as well as loans from international development banks to finance their investments.[2] However, the trend has been to reduce the role of the public sector in ports, so that port authorities must now look more to private sector financing for some or all of their development needs. In order to be financially attractive they must obviously be generating enough revenue to cover their operating costs and to cover the repayment of loans. At the same time they must be able to satisfy their clients with the quality of their services and tariffs and thus demonstrate to their lenders that future growth is assured. Also institutional reform in the port sector in many countries has created the opportunity to use private funds and other forms of innovative funding for port development. As port assets have long economic lives (10 to 30 years), are immobile and are mostly without alternative use (the exception being land which may be extremely valuable for other uses), this private finance will be attracted by substantial and steady trade flows.

(iii) The development of ports requires infrastructure, marine and cargo-handling equipment, inland connections, information and communication systems and qualified human resources. On the assumption that a one-berth container terminal can handle 100,000 TEUs per year and that growth of trade will continue at its current rate, the estimated capital investment required only for container facilities in developing countries to the end of the century will be approximately US$ 12,900 million.[3] In a major departure from traditional funding, this amount will very likely be invested by two different parties: port authorities and port operators.

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[1] As an example, in the port of Antwerp, the Flanders region and the city are financing a new quay wall for a container terminal for US$56.7 million, twelve port enterprises invested US$ 89.2 million in 1994 to enlarge and improve their facilities and eight industries connected to the port area invested some US$ 315.6 million. (Hinterland 166 (2/1995), ISSN 0773-1906).

[2] See UNCTAD, *Port financing*, (TD/B/C.4/291), November 1985, where for a sample of developing countries the sources of funding for non-bulk port projects were grants (39 per cent), reserves (24 per cent) and foreign loans (21 per cent) for the period 1978-1982, and the planned financing for 1983-1987 was foreign loans (44 per cent) and reserves (29 per cent).

[3] A rough calculation can be made of the new container handling facilities required. With container traffic growing annually by some 16 per cent in developing countries, throughput should double in slightly less than five years. The port throughput of developing countries in 1993 was 43 million TEUs based on information from Containerisation International Yearbook 1995. The estimated capital cost for a container terminal is US$ 30 million excluding the cost of land with about US$ 13 million for civil works and US$ 17 million for equipment.

(iv) The objectives of these two parties will determine the way in which these projects will be appraised. Whatever the source of funding, a financial appraisal will be required and the financial strength of the party developing the facilities will be paramount. Profit-oriented parties, such as private port operators, that are well managed will often be very attractive to investors but at the same time probably have limited needs of funding, while others with a history of operational and financial problems will be unattractive but have the greatest need for funding. Thus, a current healthy financial situation, or bright financial prospects, is a pre-requisite to attract funding. Public parties, such as the port authorities, may have additional economic or developmental objectives to attain (fostering trade, raising employment, developing the hinterland, etc.) and, therefore need to consider the economic appraisal[4] of the project as well. However, presently a port must be financially sound, whether it is private or public.

## I. INSTITUTIONAL FRAMEWORK

### A. The port authority

1. Most of the commercial ports have a body in charge of their functioning and development, namely the port authority. In practice it may take different names: port company, harbour and port company, port trust, port enterprise, port department, etc. If this body is in charge of all operating (cargo handling, vessels movements, etc.) activities and also the development and maintenance of the facilities, it is called an operating type; if the body is only limited to the development and maintenance of the facilities and leases them to others for operations, it is called a landlord type; finally, if it undertakes the development and maintenance of the facilities and also the provision of large items of equipment, it is called a tool type. Moreover, the port authority in most countries is a public body but it could well be a private one. For instance, Singapore and Felixstowe are often classified as operating ports but the former is public while the latter is private. Nowadays, most port authorities in Europe and the United States are public bodies of the landlord type, and many developing countries, which in the past were operating authorities, are now shifting to the landlord type.

2. Within this simplified view of the institutional framework, the precise relationship of the port authority with the municipal, state or national governments has an extremely important bearing on the financial management of the authority. In effect, the objective, assets, duty to report financial statements, borrowing powers, freedom to set tariffs and development role of port authorities depends on this relationship. Further, the relationship between the port authority and the port operators is also important, notably in relation to the users.

3. A generally agreed objective of port authorities is to serve and foster trade. Often some of the public authorities add the objective of contributing to the socio-economic development of a city, region or the country as a whole. Their by-laws usually state that the port authority is a legally corporate body, with separate property and its own board, entrusted to carry out port duties in connection with trade. Only in a few places, such as the municipal ports of Northern Europe (Antwerp, Hamburg, Rotterdam, etc.) is this distinct corporate body missing. In all other ports, however, there are often caveats. For instance, in many countries one of the major assets of the port authority, the land, is inalienably government-owned, or defined as eminent domain, and therefore is only entrusted to the port authority for port use. In the Port of New York and New Jersey, land may only be used for "maritime purposes" which obliges the Authority to interpret this requirement broadly to allow land to be used for warehousing based on the fact that the goods concerned have come by water.

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[4] See *Appraisal of port investment*, UNCTAD, TD/B/C.4/174, 1977.

4. Therefore, many port authorities cannot buy, sell or mortgage land. This situation is changing and in 1994, France approved a new State Property Code aimed at encouraging private investment in ports. Further the Code allowed port management to retain monies obtained through the sale of port land. The Code also authorized mortgages to be taken out on port land used for industrial undertakings. Although a private port authority may not have this impediment, it could face planning or other regulations at a national, regional or city level, which may restrict this freedom. Regulatory controls on the ownership of port land can affect the attraction of new investment and perhaps the extent of competition in the provision of terminal services.

5. A similar situation is found in relation to other assets. A private port authority having substantial under-utilized or unused assets may be able to sell them, so adding to its reserves, and helping to finance new investment. In a public port authority a crucial question relates to the ability to sell such assets **and to receive the revenues** from so doing. Some public port authorities may not have this ability. For instance, in the United Kingdom if a municipal port sells unused assets, there is a legal requirement for not less than 50 per cent of the monies received to be used to reduce the municipal debt; the remaining sum could in principle be used for new port investment or for other, non-port related, purposes. In France, port authorities are now able to collect monies, as "income of the port", from obsolete facilities which have been sold to third parties whereas before these monies went to the national Government.

6. The duty to prepare financial statements, in accordance with the country accounting standards, and to do so regularly, is a major responsibility of port authorities. The revenues and expenditures are commensurate with the authorities activities and related to the general price level of the country concerned. As expected, operating port authorities which provide more services, would generate more revenues than the landlord ones, while the tool-type authority would be in between for a given amount of cargo. Table 1 gives the revenue earned for selected public port authorities in various regions.

**Table 1**
**Yearly revenues of selected port authorities**
(in millions of US dollars)

| *Port* | *Year* | *Revenue*[a] |
|---|---|---|
| Algeciras | 1994 | 44.9 |
| Madras | 1994 | 95.7 |
| Miami | 1994 | 45.8 |
| Enapu | 1993 | 117.5 |
| New York | 1992 | 90.0 |
| Emporchi | 1991 | 69.9 |
| Singapore | 1990 | 505.1 |

[a] The yearly revenues indicated in the third column have been taken from Annual Reports and converted into US dollars by the secretariat using the average exchange rate for that year.

Source: Port Authority Annual Reports received by the UNCTAD secretariat.

7. Algeciras, Miami and New York are the landlord type of authority while Madras and Singapore are operating port authorities. Enapu and Emporchi, could be regarded as being of the tool-type. These two are also national port authorities, as is the Port of Singapore Authority. In some countries, some or all public ports come under the control of a national port authority or an autonomous transport corporation. In South Africa, a range of ports are managed by Portnet, this being part of Transnet, an organization with wider interests in transport, including railways. In Zaire, a single transport organization, Onatra, was given responsibility to develop and manage seaports and inland waterway ports as well as operating inland shipping services and railways. In all these cases, financial statements are made for the whole body and, ideally, for individual ports as well. However, profitability is assessed for the overall body.

8. There are some important ports which are developed and maintained by a department of the municipal government and for which separate financial statements are not available. In Rotterdam, the port administration, the Gemeentelijk Havenbedrijf Rotterdam (GHR), is fiscally a "Bedrijf", i.e. a separate organization. Nevertheless, the GHR is in practice a department of the municipal government, and is financed accordingly.[5] This example points out the relationship of the port body with the relevant government body. In some cases it could have far-reaching negative implications. In the state of California (United States), 1992 legislation[6] required that ports use part of their reserves for city expenditures and thus are required to finance a larger portion of their capital development through borrowing. In Poland, revenues, which normally accrue to ports, are being collected by the national government.[7]

9. In many countries, the freedom of port authorities in relation to their generating revenue is restricted due to the need of having a government sanction, or even in some cases of a parliamentary one, to modify the tariffs. Such permission has often been difficult to obtain and port charges consequently have remained unchanged for lengthy periods and, obviously, have given rise to problems in relation to the viability of new port investment. Furthermore, it can also be difficult to make special pricing arrangements with specific users: for example, to secure business for planned new port facilities. Such inflexibilities could have negative implications for the financing of port investment. Fortunately, there has been a widespread and substantial growth in inter-port competition in recent years, and against this background, there has been a growth in the freedom of ports in relation to their arrangements for setting charges.

10. Similarly, port authorities may be constrained by legislation on the maximum permissible amount of borrowing at any particular moment and from whom a port authority may borrow. It is common that a public port authority may only be permitted to borrow from the municipal, state or national governments. There may also be restrictions on the **basis of borrowing** by a public port authority. In Britain for instance, a public port authority, was formerly only permitted to grant lenders a general guarantee on its assets and revenues and as a result lenders seemed less attracted than if they were granted a guarantee against specific assets. Borrowing powers are particularly relevant for development and most

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[5] The practical limitations to the autonomy of the GHR are shown by the existence of a port advisory body, with elected members of the City Council but not port users, which meets weekly and clears any proposals over Netherlands Fl. 3 million (approximately US$1.88 million).

[6] The legislation states that ports "located on tide or submerged lands within chartered cities may spend discretionary reserves for municipal services within those cities". "Discretionary reserves" are defined in the 1992 legislation as "25 per cent of the total current assets of a port, less current liabilities... or US$4 million, whichever is the greater".

[7] *Restructuring and Privatization of Polish Sea Ports*, Ports and Harbors, November 1995, pages 20-22.

public port authorities can only obtain finance for port development from their municipal, state or national governments.

11. National port or transport authorities assess development projects in light of the overall financial situation rather than the individual financial capacity of a port. There have been examples in the past where the existence of a combined railway and ports organization has led to port development policies being pursued primarily to benefit the railway sector against road transport competition and possibly leading to the detriment of the ports sector. Many of the ports owned by the largest United Kingdom port authority, Associated British Ports, owed their very development and financing to the railway interests and ownership.

**B. The port operator**

12. The move away from the operating type of port authority to the landlord port authority means that separate corporate bodies such as cargo-handling operators are now participating in the development of ports and, of course, in their finance. This has been the case in a number of ports worldwide: Buenos Aires (Argentina), Kelang (Malaysia), Maputo (Mozambique) and Veracruz (Mexico) to name but a few. Most of these port operators are in the private sector. However, there are also powerful ones in the public sector. The largest operating company in Hamburg, the Hamburger Hafen- und Lagerhaus-Aktiengesellschaft (HHLA), is wholly owned by the province and works in the port in competition with private sector companies.

13. The need for private funds in port development follows the reluctance of some governments to continue to be the sole investors in the ports. In the United States, for instance, cost-sharing agreements were enacted in 1986 whereby users will pay, along with the public sector, the capital and maintenance dredging costs. In Spain, in 1994 it was stated that the national ports were to be financially self-sufficient and were to fund their own expansion. Therefore, the development of ports has increasingly come to rest on the finance that can be made available by port operators.

14. Most cargo handling port operators are joint stock companies with shares owned by several public and private interests. Among the former are public bodies and companies while among the latter are shipowners, large international cargo handling companies which could or could not be subsidiaries of shipping companies, transport companies and other interests. Several possibilities are feasible for the structure of these companies. For instance, companies with cargo handling and perhaps shipping agency interests may participate in the ownership, possibly in collaboration with purely financial interests, who have capital resources, but who do not have their technical knowledge, skills and shipping industry contacts. This pattern of ownership allows the use of share capital for development schemes.

15. As for other joint stock companies, several factors, such as the company's past performance, its size in relation to a proposed development scheme and the potential gains that may flow from demand for port services, will determine the ability to secure finance for the purpose. National attitudes to investment, and particularly to foreign direct investment, may also come into play. However, a major factor in deciding investments is the nature of the facility to be provided by the port operator. In a public-user facility, such as a container terminal open to all vessels, the risks of not reaching the forecasted traffic are higher than in the case of a dedicated facility in which the commitment of one, or more shipping lines, greatly reduces those risks and make raising finance easier. A compromise is sometimes made by having preferential-user facilities where major lines enjoy priority berthing. The decision is complex because some shipowners may have a strong preference for having their own berth or terminal for operational or marketing reasons while the port may not have available space to allow this to happen.

***Box 1***
***Excerpts from the Malaysian Port Privatization Act, 1990***

- *Section 8 expressly says that "the [public sector] Port Authority shall.. exercise regulatory functions in respect of the conduct of port activities and the running of port facilities and services in the ports by licensed operators including the determination of their performance standards and standards of facilities and services provided by them and the enforcement thereof" (present author's underlining).*

- *Under Section 9 (1), port undertakings may not be transferred to or managed by any person other than a person licensed by the Port Authority.*

- *Section 9 (4) requires licenses issued by the Port Authority to set out the types of services or facilities to be provided.*

- *Under Section 10 (1), a Port Authority may at any time suspend or revoke licenses for breaches of the conditions under which they were granted.*

- *Under Section 12 (1), it is the duty of a licensed operator to provide port services specified in this license to such extent as is necessary for the licensed operator to meet the performance standard determined by the Port Authority.*

- *Under Section 12 (2), licensed operators shall have due regard to ... efficiency, economy and safety of operation in respect of services and facilities provided.*

- *Under Section 13 (1), every licensed operator shall*

  *(a) .. at the end of the financial year ... submit a report of its operations during that financial year containing such information as is necessary to enable the Port Authority to make an informed assessment of such operations...; and*

  *(b) submit to the Port Authority ... (ii) its cargo forecast over such period and in such form as may be determined by the Port Authority from time to time; and (iii) future development plans relating to any facility or service which it is bound to provide under the conditions of the license.*

- *Under Section 14 (1) every licensed operator must at all times immediately inform the Port Authority of various matters : including any change in the control of the licensed operator.*

16. All this points to the need for a close partnership between the port authority and the port operators which should go beyond the formal long-term contract (lease or concession) binding them. Concessions are awarded to operators after bilateral negotiations or, more often, after competitive bidding. Terms and conditions of the concession are prepared by specialized firms which often help in the selection process. Then the port authority should exercise its regulatory role judiciously as the existence and nature of such regulations, and the spirit in which they are enforced, may substantially affect the willingness of private-sector sources to invest. A more rigorous approach to the use of regulatory powers in respect of private sector operated ports or terminals can be seen in Malaysia, in the legislation relating to port privatization. Some examples of this approach from the relevant bill (which gave rise to the Port (Privatization) Act, 1990) are given in box 1. These are potentially very substantial powers: and their impact on the

willingness of the private sector to finance port investment must depend on the extent and the way in which they are used.

17. Further, the type and extent of regulation of port labour can have a very substantial influence on requirements and on the financing of investment schemes. The experience in United Kingdom showed that the abolition of the National Dock Labour Scheme lead to considerably increased inter-port competition, freedom from disruptive strikes and improved dock worker morale. Management has therefore been able to take a much more positive attitude towards new investments. This has been paralleled by an increased confidence on the part of users in the reliability and performance of the ports they use and a willingness to enter into long-term agreements with port authorities/port companies. This, in turn, has led investors to be willing to purchase shares to fund development schemes of such privatized ports.

18. Still, governments' regulation can have a substantial influence on the location and extent of port investment, and therefore of port financing requirements. There may be ceilings or administrative delays in obtaining authorization for port investment to prevent the development of excess capacity and wasteful competition between ports. In practice, it may be very difficult to accurately forecast the future utilization of proposed port facilities and, therefore, such regulations may lead to a fossilization of existing patterns of availability of port facilities in a country, and possibly to a lack of sufficient inter-port competition to ensure efficiency.[8]

19. The government's tax regime for port authorities and port operators may or may not be different. In some countries port authorities are exempt from corporate tax while in others they are taxed. In all cases, port operators are liable to pay the corporate tax of the country. The tax structure can affect the attractiveness of financing development schemes.

## II. FINANCIAL OBJECTIVES OF PORT AUTHORITIES

20. Port authorities usually have financial objectives in line with their overall objectives. As explained in previous reports the general objectives are usually the result of the decisions and compromises reached by the different parties active in a port.[9] The financial objectives may not always be explicit but they exist and have a strong impact in financing port development and because of this are often a matter of controversy.[10] In general, it is desirable as a matter of good management that the totality of port revenues should be sufficient to cover the totality of port operating and maintenance costs, and of capital costs on a replacement cost basis. Indeed, doing this helps to ensure the good financial reputation of the port authority which is required to obtain outside finance.

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[8] During the 1980s, the United Kingdom Department of Transport ceased to enforce the requirement for port authorities to have its permission to carry out port development over a certain amount as specified in the Harbours Act, 1964.

[9] *The principles of modern port management and organization*, UNCTAD, TD/B/C.4/AC.7/13, para. 55 to 60 and *Strategic planning for port authorities*, UNCTAD, UNCTAD/SHIP/646, para. 68 to 71.

[10] See for example, the special issue of Maritime Policy and Management, Volume 13, 1986, in which the subject of financial assistance for seaports is discussed by authors from different countries.

21. However, it does not follow that all port authorities are necessarily profitable because of the importance given by some of them to the port as a generator of economic activity and employment. While French ports must have balanced budgets, this does not mean that they wish to make a large profit. The port of Copenhagen has not the objective to achieve a maximum possible surplus, though it does wish to be profitable and increasingly self-financing. British ports are mostly profit-oriented ones. These differences among European ports may explain their continued interest in the European Commission's work in connection with financial issues and port development.[11] Moreover, the financial objectives may shift in the same country through the years. A recent finding in United States ports detected no trend towards financial self-sufficiency or increased profitability which is contrary to the findings of previous studies made over the last two decades.[12]

22. Whatever the financial objectives of the port authorities are, all of them face, sooner or later, the need of funds for development. Therefore, it is not surprising that even those trying to foster national or regional development or employment, try to obtain some funds for development. In practice this is done by setting targets on the return on capital, a positive cash-flow and the level of special reserves.

### A. Return on capital

23. The financial target of return on capital is simply to fix a minimum percentage rate of return. However, there are certain disadvantages of concentrating solely on this target:

- There is no uniquely correct rate of return on capital for all ports within the same country, or even in relation to different ports belonging to a single port authority;
- There are likely to be differences in the opportunity cost of money to different port organizations;
- There will be substantial differences in interest rates at different times;
- Figures of capital employed, especially in relation to net current assets, can be affected by year-end "window dressing" thus making comparability difficult.

24. Additionally, problems also arise because of the way depreciation is made for the high proportion of port capital typically accounted for by land, port structures and equipment. In effect, the provisions for depreciation may differ due to the different estimates of the replacement value of the assets and the assumptions of asset life. This can result in wide fluctuations in the return on capital.

### B. Cash flow

25. This consist in setting a target of the yearly net operating surplus to be obtained after paying interest for loans, taxation and dividends to shareholders, if any, but adjusted for non-cash items included as expenses, such as depreciation, cash items not to be included as revenue, i.e. exceptional income, for example, from disposal of assets, and changes in deferred liabilities/provisions and in working capital components such as stock, debtors and creditors. Ideally the target is established so that the net surplus will be sufficient to cover the amortization of capital debt and to finance a proportion of capital expenditure. In this way the shortcoming of the objective of return on capital, is solved because

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[11] See for example *Pour ou contre une politique portuaire européenne?*, editorial in Le Lloyd (Anvers), No 41032, 14 octobre 1994, page 3.

[12] See *Public Port Financing in the United States*, Maritime Administration, Office of Port and Intermodal Development, Washington DC, July 1994.

depreciation is not included and is replaced by the amortization charge. The positive cash flow is used to give an approximation of the funds produced internally for self-financing.

26. Cash flow certainly has a very direct relevance for borrowing requirements. Furthermore, it has important implications for the ability to carry out investment, and may be a constraint that forces the port authority to prioritize an investment programme. Other advantages of using cash flow as the financial objective are:

- It deals with the situation of each port as it is, taking account of differing capital structures (e.g., debt ratios and equity capital) and differing costs of capital;
- It provides a comprehensible and acceptable target for management and the investing public;
- A presentation of the year's cash flow can easily be included in all annual accounts as a guide to performance;
- It goes some way towards solving the question of accounting in an industry where the major proportion of capital employed has often been financed by debt: by providing for full amortization of past debt at its book "value" and a proportion of capital expenditure at values then current, it is possible to provide regularly for any increases in construction costs.

27. However cash flow has also some problems. One problem is that repayment of capital debts as well as providing in part for the future fixed assets may be a heavy burden at a time of high obsolescence. Other problems are:

- "Expansionary" capital expenditure tends to involve very large amounts at irregular intervals, with the result that it may be difficult to forecast the timing and level of expenditure for which internal provision has to be made;
- Disposal of assets occur which again can involve large amounts at irregular intervals. Further, the assessing of amounts realizable from disposal of land many years ahead presents obvious special problems;
- The "target" of an expanding port organization may be financially more demanding than that of one which may be faced with a gradual run-down of its facilities: so that an obsolescent port may be able to follow pricing policies which give it additional life;
- Where debt is repayable at maturity several years ahead, the cash target flow for each intervening year would need to include an amount by way of "contribution" towards meeting the debt maturities when they fall due, and the determination of the amount of the "contribution" will sometimes give rise to lengthy calculations.

28. The sufficiency of cash flow to meet maturing liabilities and an element of capital replacement/expansion is essential for the survival of any business. In view of this, the prime objective can be expressed in cash flow terms, but that this should be applied in conjunction with a fall-back criterion based on return on capital.

### C. Build-up of reserves

29. Port authorities may decide to build up special reserves, or a sinking-fund, to finance development projects in part or in whole. The yearly allocations and the extent to which they will be able to finance new investment vary greatly. For instance, private port authorities or large public ones may build substantial reserves that are potentially available for their expansion. In some cases their growth will arise partly from the real estate business as it is the case with Bombay Port Trust and Associated British Ports

(ABP) though at certain periods, as for ABP, reserves may be needed to offset losses in that business.[13] Smaller port authorities may not be in a position where they can build up reserves but if they belong to a national port authority, they may benefit from allocations from that body for fostering development.

30. In general, the build up of reserves and their use is affected by government decisions. As it was mentioned before, ports in California (United States) may have to use some reserves for non-port undertakings. In France, the port of Le Havre, leaving aside major schemes, carried out a substantial amount of self-financed investment so as to reduce the magnitude of its future debt. However, the government decision to involve private-sector companies have reduced the requirement of the port authority for self-financed development and thus the need for reserves.

## III. SOURCES OF CAPITAL FUNDING

31. Potential sources of financing to meet port investment requirements have increased in the last decade and include:

- self-financing from reserves;
- debt (borrowing, bond issues) and equity (raising of new capital) financing;
- joint-venture financing: with development costs being borne both by a port authority and by a user, e.g. a shipowner, a shipper or receiver, or a terminal operating company (concession or lease);
- user financing: e.g., with the sole user of a terminal financing its development.

32. Also, government financing may be available to port authorities for investment projects carried out in connection with objectives such as encouraging economic development. This financing may well be the responsibility of different ministries/government departments, for example with responsibility for regional development and for transport respectively. However, this government finance has come under increasing pressure in various countries because of macro-economic requirements to hold down the totality of government expenditure. Such pressures obviously affect the potential availability of government resources to fund port as well as other investment. For example, in the past in France, 80 per cent of large common user infrastructure investment in major ports (access channels, port entrance locks) and 60 per cent of other infrastructure (quay walls) could be state-funded, but now, in most cases, only 20 per cent of such costs are state-funded. As a result port authorities are now increasingly looking for sources other than government financing to fund their investments.

### A. Self-Financing

33. Self-financing from reserves is obviously a potentially important source of funding for port investment. However, it may be only sufficient to carry out investments of relatively modest size. Whenever a substantial investment is required new funds need to be tapped. For instance, unused physical assets without potential port use can be sold or monies from the sale of port land could be made available to the port authority. Institutional changes in the latter can help too. For instance, a port authority could decide that terminal operating companies will provide the quay pavement and cranes. Innovative ways of self-financing cannot be ruled out as shown by the port of Gothenburg (see box 2).

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[13] See *Clearing the decks*, Port Development International, April 1993, page 17.

***Box 2***
***Example of pension fund financing Port of Gothenburg***

*In Gothenburg in 1985, the city council instructed the port management to form a company with the city as the sole shareholder. The company, Port of Gothenburg AB was created and given all the facilities and henceforth the port must be operated on the basis that all operations and investments will be self financed out of earned revenue. To obtain capital and operating funds, the port sold its infrastructure to a large Swedish pension fund and then leased back the facilities at a fixed rate plus a variable rate equal to the rate of inflation. Since the restructuring, the port has been profitable through cost cutting and increased cargo throughput and has no longer been dependent on the city for subsidies.*

*Source: From information collected by the UNCTAD secretariat (Cargo Systems, August 1995).*

34. The extent of self-financing is potentially affected by profitability, the desire of the organization to make investments in port facilities/equipment and the amount of capital expenditure involved. Pricing[14] and demand are the two key elements affecting profitability. Profitability is relevant in two ways. First, it generates resources which can be reinvested and generate future profits. Secondly, it has an important psychological impact in that port authorities and other parties become willing to make substantial investments in port facilities and equipment.

35. Leasing equipment from third parties[15] could be regarded as another way of self-financing as it reduces the capital outlay required. The following are the types of lease which may be used for cargo handling equipment. The *full-payout lease* is a lease which is intended to furnish the lessor with sufficient cash flow from the initial non-cancelable term to cover the lessor's costs for purchasing the leased equipment, his finance, administrative and other expenses, as well as his profit. A *finance lease* is a full-payout lease involving obligatory payments by the lessee to the lessor that exceed the purchase price of the leased equipment and the finance costs. A *tax-based lease* is a finance lease in which the terms have been arrived at by close attention to applicable tax laws and regulations to maximize tax advantages to either or both the lessor and the lessee. Most finance leases in the United States and the United Kingdom are tax-based. Their purpose is to maximize tax benefits, for example investment tax credits and depreciation deductions to the lessor, with the result of lower rental payments by the lessee. A *leveraged lease* is a finance lease in which the lessor has borrowed the majority of the funds required to purchase the leased equipment from a bank or other lender.

36. A port may potentially be reasonably self-sufficient as regards the financing of investments of relatively routine size. However, if a substantial new investment is required, it may not be possible to self-finance such an investment. Ports may also have physical assets which are unused and without potential for port use, and which can be sold. The revenue from the sale of port land may provide an important source of funding for new port investment. Also there may be changes in the role of a port authority. For instance, instead of a port authority comprehensively providing port facilities, there may be a situation in which terminal operating companies provide the quay pavement and cranes. Such

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[14] For a detailed discussion of pricing see *Strategic pricing for ports*, UNCTAD/SDD/PORT/2, 1995.

[15] For a detailed discussion of leasing contracts see *Analysis of equipment leasing contracts*, ST/CTC/36, United Nations, New York, 1984.

changes can significantly affect the port authority's investment requirements. If this opportunity does not exist, there will be a need to turn to alternative sources for this purpose.

**B. Debt and equity financing**

37. Debt financing, notably from multilateral development agencies and backed by the government, has been a popular way to undertake port development in developing countries. A major lender is the World Bank Group and table 2 gives an indication of the number of loans for waterborne transport projects that were either under implementation or approved in the period 1987 to 1993. There are also new opportunities for local commercial banks, equity and bond markets, and institutional investors such as insurance companies and pension funds to finance port development.

38. The underlying purpose of multilateral funding is to encourage economic development. However, the resulting financial obligations may be difficult for port authorities in some less developed countries to bear. In view of this, special arrangements have been devised to help countries with such problems and the International Development Agency, within the World Bank Group, grants loans on "soft" terms to countries with a low per capita GDP. The multilateral aid agencies give a high priority to transportation project financing. In 1994, 15.8 per cent of the World Bank lending totalling US$3,293 million was allocated to transportation, the second largest sector. The emphasis was even stronger with some of the regional agencies. The Asian Development Bank (ADB) devoted 17.66 per cent of lending to the transport sector, exceeded only by agriculture and energy, while the equivalent proportion for the African Development Bank (AfDB) was 16.25 per cent, exceeded by agriculture and public utilities.

**Table 2**
**World Bank Port Lending Portfolio**
(US$ millions)

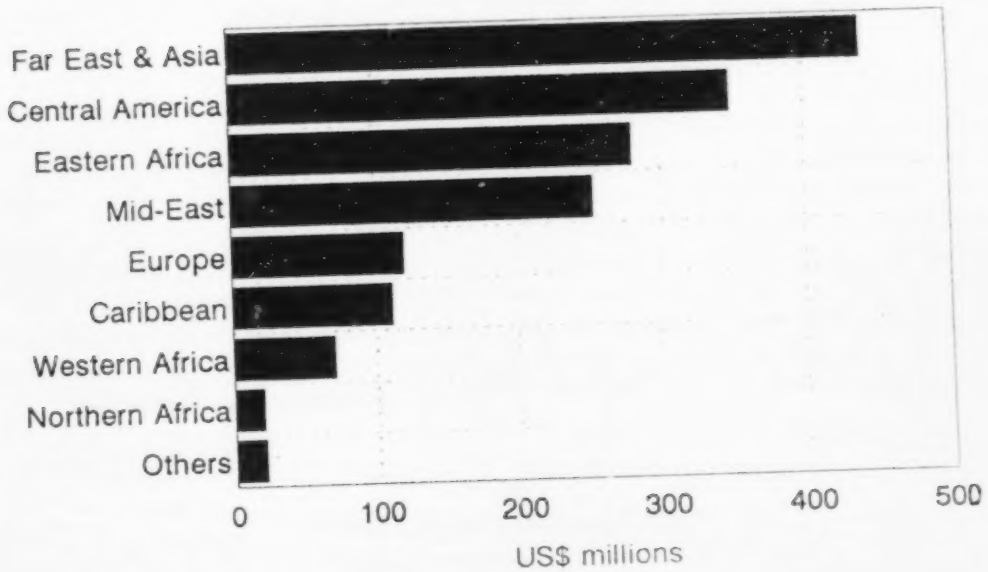
| | *No.* | *Total* | *Co-fin* | *Local* | *Loan* |
|---|---|---|---|---|---|
| *Dedicated waterborne transport projects approved before Jan 87 and under implementation Jan 87 - Dec 93 (loan as percentage of project 42.4)* | 24 | 2841.2 | 310.6 | 1309.5 | 1194.1 |
| *Dedicated waterborne transport projects approved after Jan 87 (loan as percentage of project 41.4)* | 12 | 1954.5 | 151.8 | 993.6 | 809.1 |
| *Projects with waterborne transport component approved after Jan 87 (waterborne transport component was 7.7 per cent of total loan)* | 55 | | | | 426.5 |

Source: From information supplied by the World Bank Group to the UNCTAD secretariat.

39. The following figure gives an analysis of the major current recipients grouped by geographic area of multilateral funding in the ports sector based on current port projects funded or under consideration in the fourth quarter of 1994. Just over half (US$850.4 million) originates with the World Bank Group, the

regional agencies, principally the ADB, AfDB and Inter-American Development Bank contribute a further 38 per cent (US$640.9 million) with the balance (US$181.7 million) coming from various forms of European Union assistance.

**Figure 1**
**Recipients of multilateral funding in the port sector grouped by area**
(US$ millions -- 1994)




Source: Based on data from G.P.Wild (International) Ltd.

40. Infrastructure has traditionally been the preserve of the public sector, partly on account of its perceived strategic importance to the economy, and partly because of the large investment costs and long gestation periods usually associated with such projects. Recently, however, private lenders have been able to mobilize the funds necessary to finance infrastructure projects and willing to accept both project and country risks, provided that the institutional framework of the country has met certain minimum standards and the projects have been appropriately structured. Ultimately more funds need to be mobilized domestically and governments that recognize this are taking steps to develop their local capital markets. The main reasons for the shift towards private involvement in infrastructure is the growing disenchantment with public monopoly ownership and provision of infrastructure services, fiscal constraints on governments and external aid agencies, developments in technology and finance and the globalization of financial markets.

41. Commercial debt financing typically involves a syndication of lenders[16] which can be time consuming and complex. Also commercial banks are constrained by the time profile of their deposits as

[16] To modernize and upgrade its cargo handling facilities in Manila's South Harbour complex, Asian Terminal Inc. has secured loans of US$15.4 million from a syndicate of seven local banks, US$5 million from International Finance Corporation (World Bank) and US$10 million from ANZ Banking Corp. (*Containerisation International*, November 1995).

they cannot prudently lend large volumes of long term debt. The longest international commercial bank loans are typically 7-12 years. In contrast, many infrastructure projects require financing of over 10 years maturity if the tariffs to service the debt are not to be prohibitive. Institutional sources with long term depositors, such as pension funds and life insurance companies, provide a better maturity match for infrastructure financing but are highly risk averse.

42. Commercial lenders, such as banks, pension funds and insurance companies, may consider that financing of infrastructure projects improves their risk-exposure. Private port authorities and operators which could issue corporate bonds based on their credit, or that of their parent companies or principals, could attract investors seeking long-term, stable returns. The ability to borrow and the rates of interest are related to the credit rating of the borrower.[17]

43. The participation of commercial lenders has not eliminated the need for the multilateral development banks and there are about 30 to 40 banks worldwide involved in project financing. In fact, they work together in specific projects, as the provision of an efficient infrastructure is now widely recognized as indispensable to economic progress. The World Bank's International Finance Corporation (IFC) is involved in the financing of private sector infrastructure projects. Also the European Bank for Reconstruction and Development (EBRD) devotes at least 60 per cent of its financing - both overall and country-by-country - to private sector enterprises; with the remaining 40 per cent dedicated to projects which support private sector investment. The IFC is the largest single source of project and corporate finance to private companies in developing countries (providing loans, equity, other financial instruments and advisory services). They have identified a number of trends in developing countries with private involvement in developing countries.

- Large amounts of private finance can be mobilized for infrastructure projects;
- Private financing and management of infrastructure can deliver better service performance than under public sector management;
- Private financiers and managers can provide rapid responses and innovative solutions to infrastructure requirements;
- The most difficult hurdle is the initial project;
- Accessing both international and domestic capital markets is crucial for infrastructure financing.

44. Debt financing from bond issues is used by some public port authorities, notably those in the United States, to raise funds for development. In this country, the various types of bonds, with an interest rate

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[17] The following are the definitions used by a credit rating agency to indicate the credit worthiness of a company. **Investment grades** go from AAA to BBB: AAA is the highest with extremely strong capacity to pay interest and repay principal; AA has a very strong capacity to pay interest and repay principal and differs from the highest rated issues only in a small degree; A has a very strong capacity to pay interest and repay principal although more susceptible to the adverse effects of changes in circumstances and economic conditions than the higher rated categories; BBB has an adequate capacity to pay interest and repay principal, whereas adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to pay interest and repay principal for debt in this category than in the higher rated categories. **Speculative grades** from BB to C are regarded as having speculative characteristics, with large uncertainties or major exposures to adverse conditions. BB has less near-term vulnerability to default than other speculative issues, however conditions could lead to inadequate capacity to meet timely interest and principal payments. B has a greater vulnerability to default but currently has the capacity to meet interest payments and principal repayments. Adverse conditions will likely impair capacity or willingness to pay interest and repay principal.

comparable or slightly better than the rate offered on the market due to their exemption from Federal-tax, are:

- general obligation bonds;
- revenue bonds;
- industrial development bonds.

General obligation bonds are bonds which have a pledge from the state or municipal government that taxes will be raised to pay principal and interest on outstanding debts; revenue bonds have revenue generated from various port economic activities pledged to repay the bond; and in the case of industrial development bonds, the facilities financed by the bond issue would be leased to private corporations and the lease payments would be used to pay back the bond.

45. The flotation of shares is another way in which port authorities may get funds for development. However, this alternative is only open to private port authorities and operators or to public ones in the process of privatization. Obviously, this type of solution is more attractive if it is in line with general government policy to increase the extent of private sector ownership. However, the successful flotation of shares will be dependent on the existence of a stock exchange in the country concerned, and on the extent to which sufficient capital is available. The actual success of a flotation depends on either:

- The port having a good record of profitability; or
- The port expecting a significant positive change in the factors affecting port profitability.

46. If there is to be a flotation of shares in a new joint stock company which is to take over the assets of a former public port authority, it may be decided to give special treatment to employees, so as to encourage employee share ownership. For instance, it may be decided that:

- All employees who had been employed for a specified length of time before a certain date would be entitled to a given number of shares, free of any payment and only subject to their applying for them and that;
- All employees on a specified date would be entitled to apply for up to a certain number of shares on a special basis, e.g. with each share purchased being supplemented by an additional share free of payment.

This is clearly intended to promote employee corporate loyalty and a positive attitude of personal involvement and interest in the success of the company. Also a stock option purchase plan at a reduced price, up to a certain percentage of salary, may be made available on a regular basis.

47. For the transition from the public to the private sector, there is no single blueprint for what works. There are three main ways in which the private sector entry is occurring. Deregulation and unbundling (opening of market to multiple service providers) means transferring parts of the activities of a public company or utility. For instance, different private port operators may take over cargo handling, towage, etc. from an operating port authority. A second approach that requires considerable political will is to divest state companies or utilities, but to postpone the unbundling to attract a strong response from private financiers. In the ports field this corresponds to an outright sale of an operating port authority. The third approach is simultaneous unbundling, deregulation and divestiture which requires significant political commitment and institutional capability.

48. In this sense, ports are immersed in a process that encompasses several sectors of the economy. Between 1988 and 1992, governments in 15 developing countries sold US$20 billion worth of assets in

telecommunications, power generation, transmission and distribution, gas distribution, railroads, roads, ports and water utilities.[18] The majority of this divestiture was concentrated in telecommunications, power generation and distribution and gas distribution. In the first half of 1994 IFC reported over 350 infrastructure projects under preparation or implementation in 39 developing countries, most of which involved private participation. Most of these projects have been in Latin America and Asia. It is estimated that for every dollar invested by IFC in a project a further US$8.30 were provided by others.[19] The sources of funds have been private local lenders and investors (26 per cent), private foreign lenders and investors (25 per cent), suppliers credits (10 per cent), EXIM banks and multilateral banks (9 per cent). The balance was provided by reserves of the investing body (19 per cent) and IFC (11 per cent).

49. The main question for many governments is how to manage the transition to private involvement so that it delivers as many benefits as possible. The main problems faced by governments are how to implement changes in the face of political opposition from important groups, how to manage the transition from subsidized infrastructure service prices to cost-related tariffs and how to gain access to external technology and management, without engendering overriding opposition to "foreign control" of politically sensitive assets and services. Governments have addressed these concerns by financing redundancy packages for employees of privatized companies; reserving some shares for sale to employees, usually at a discount to the market price; requiring a concession winner to undertake a specific investment programme within the first few years; stipulating specified quality targets and holding a performance bond in reserve, to be forfeited if the concessionaire fails to meet the standards; retaining some ownership, both to maintain some influence and to maximize revenue and restricting a concession's exclusivity period, in order to combine the benefits of rapid capacity increases in the short term with the threat of new entry later.

50. In any case, to make a port project financially attractive, its value should be maximized and its risks minimized, so that the prospective lender is convinced that the debt will be repaid with a low probability of default and the potential shareholder perceives an attractive return at an acceptable level of risk. Compared with other transport projects, port projects may be more attractive due to:

- Foreign exchange earnings;
- Strong market demand;
- Stability of revenue (long term service contracts);
- Low operating and maintenance costs;
- Lease financing of capital equipment.

51. Efficient risk allocation is central to making projects financially appealing. Four kinds of risk can be distinguished - currency, commercial, policy-induced and country. International lenders rarely assume currency risk by denominating their repayments in foreign currency terms and in many recent private projects, service prices have been linked to an international currency. Commercial risks may arise from uncertainties related to the cost of production and as well as the demand for services. Policy-induced risks can be reduced by the "take or pay" contract in which the buyer agrees to pay a specified amount regardless of whether the service is used. For instance, the flat rate lease or concession of a container terminal reduces risk to the port authority. Country risks are normally guaranteed by governments but in some cases private international lenders may look for additional guarantees from creditor countries or

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[18] Database from F. Sader, *Privatization and foreign investment in the developing world, 1988-1992*; World Bank.

[19] *Financing private infrastructure projects: emerging trends from IFC's experience*; International Finance Corporation; Discussion Paper Number 23; World Bank; 1994.

from multilateral banks. For example, export credit agencies exist in OECD countries for goods and services and the World Bank has created the Extended Co-financing Facility (ECO) to cover sovereign risks associated with infrastructure projects and also the Multilateral Investment Guarantee Agency (MIGA) which promotes foreign direct investment through guarantees, policy advice and promotional services.

### C. Joint ventures

52. A joint venture may be set up, for example, between a port authority and another party with financial resources and management skills relevant to a particular traffic. Its relevance may relate not only to its presumably being a potential source of capital for investment, but more importantly to its possibly providing a way of increasing port competitiveness. Consequently, a joint venture implies shared financing and normally a joint management of the business.

53. Organizations participate in joint ventures because of the existence of common interests. There may be financial reasons for a port authority to participate in a joint venture: for example, inadequate availability of capital/foreign exchange required for port developments. On the other hand, the port authority owns facilities at a presumably attractive location, has an organization built up in relation to port requirements, has marketing skills and contacts, and has existing port users. The other participant(s) in the joint venture are likely to have resources which are complementary to those of the port authority: for example, capital to invest (including foreign exchange); complementary management skills; and possibly also complementary technical/operating skills. Such skills may be relevant for instance in relation to the development of specialized port terminals and their availability can be helpful for the marketing of the port to potential new users.

***Box 3***
***Example of joint venture financing - Tanjung Priok, Indonesia***

*Expansion plans for a new container terminal in Tanjung Priok, will require capital of US$825 million. Finance will come from a combination of sources, a joint venture with a state owned transport, investment and communications conglomerate and a foreign company will provide 49 per cent, bank loans will cover 30 per cent and the Indonesian Port Corporation (Pelabuhan II) will fund 21 per cent. Pelabuhan II will raise its share by issuing bonds -- US$50 million initially and then US$174 million at a later date.*

54. There are wide variations in the extent to which port developments are carried out on a joint venture basis in different countries, or even within the same country. The involvement of port authorities in joint ventures may depend of prior authorization by the relevant government as well as their legal status. In one country, a public sector-owned port, not being a corporate body is unable to participate in joint ventures, while another public sector port, being a limited company, is indeed able to participate in them. Moreover, the extent of the port authority's shareholding in a joint venture may also be decided by the government in view of competitive considerations at the time of its creation. For instance, the willingness of a port authority to accept a minority shareholding has obvious potential implications for its freedom of action, but may be the highest proportion that is achievable in a situation with keen inter-port competition.

***Box 4***

***Example of joint venture financing - Manzanillo, Panama***

*The Manzanillo International Terminal was developed as a joint venture between a Panamanian firm (Motores Internacionales) and a foreign cargo handling firm (Stevedoring Services of America). This private port with a total cost of around US$110 million for handling containers was partially funded by the World Bank's private sector arm (International Finance Corporation - IFC) and international (ABN-Amro Bank, GE Capital and Transamerica Leasing) and domestic commercial banks. IFC provided US$25 million and the international banks provided US$35 million. A contract with the shipping alliance of Nedlloyd, APL, Mitsui OSK and OOCL will provide a steady stream of revenue.*

55. Another, vastly more popular, form of joint venture is the granting of a lease or concession to a terminal operator. This is the case for landlord port authorities selecting, often through competitive bidding, companies to lease land and/or facilities to develop and operate terminals. Normally, in this case, the port authority's only say in the management of the facility is specified in the terms of the lease. Whole port areas may be leased to these operating companies where quays and backing areas, transit sheds and cranes already exist. The extent, adequacy and quality of port facilities leased naturally makes a substantial difference to the investment requirements for any company taking up a lease in a port.

56. The lengths of leases, or concessions, depend on what is being leased; equipment leases are liable to be relatively short, leases of land and terminals longer. Commonly, leases of terminals and land run over periods of 15-30 years. In special cases, leases of up to 50 years may be granted for land. This will depend on the value to the port of attracting the business concerned, and on the magnitude of investment involved. Furthermore, where substantial development has taken place, a renewal option is normally offered when a lease comes to an end.

57. An important point to be considered by the port authority in leasing out terminals is the treatment to be given to users by the lessee. This together with other factors such as the risks of traffic expectations not being materialized need to be incorporated in the clauses of the contract.[20] In general the overall framework is that of a close collaboration of the port authority with the operators for the benefit of the port as a whole.

58. Another form of joint venture is the Build-Operate-Transfer or BOT arrangement. Typically a private party (or consortium) agrees to finance, construct, operate and maintain a facility for a specific period and then transfer the facility to a government or other public authority.[21] The port authority will provide the land while the consortium would be responsible for construction which could involve the construction of infrastructure, for example quay walls as well as superstructure. The developer's equity stake is a guarantee to government that the facility will be well managed. A BOT proposal should include

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[20] For the usual clauses in these contracts see *Rights and duties of operators and users of container terminals*, UNCTAD/ST/SHIP/6, 1986, and *The commercial risk factor in container terminal management*, UNCTAD/ST/SHIP/12, 1987.

[21] Jawaharlal Nehru Port Trust (JNPT), operator of Bombay's new port launched an international tender at the end of 1995 to invite international terminal operators and shipping lines to bid for the right to build and operate a new two-berth container terminal. The new terminal is estimated to cost US$145 million to build and will be offered on a 20-year lease under a BOT arrangement.

development plans, construction time schedule, business plan, terms and conditions for terminal operations, project financing plan and projected turnover plan.

### D. User financing

59. User financing may apply to the development of a port, or port-related, facilities owned by the user. It generally relates to bulk terminals[22] and under certain circumstances, container terminals. It can be carried out by national organizations, either from the public or private sector and by transnational corporations. Normally, the port facilities are part of a substantially wider investment, for example centered on an inland mining development which also includes a connecting railway.

60. User financing is very evident at both ends of the bulk oil trades. Oil company owned facilities are very much in evidence in oil importing locations along with some port authority owned oil jetties. Terminals loading iron ore are normally financed by transnationals, with the same organizations owning or substantially owning iron mines and connecting railways. The situation in discharging ports is more varied. An iron ore importing terminal may be owned by a steelworks or by a port authority. Aluminum is another industry where there is a substantial transnational presence, in relation to the financing and operation of terminals: in this particular context, both at exporting and at importing ports.

61. User financing of port investment may also take more indirect forms. For instance, in the grain trade, a majority of the grain loading ports used by large bulk carriers are operated by international grain trading houses and agricultural co-operatives. This is also indicative of the ownership and source of finance for grain terminal development. Most of the terminals receiving grain imports in large bulk carriers are privately owned or leased, and operated by international grain houses or stevedoring companies.

62. There may be scope also for investment in ancillary facilities, for example the development of cold storage, either generally, or in connection with the requirements of a specific trade (for instance in Belgium and in the Netherlands, in connection with the requirements of imported frozen fruit juice). Similarly at various United Kingdom ports, there has been substantial investment by port users in covered and open storage facilities for forest products. Such investment generates potentially important marketing benefits for the port. The traffics concerned pass through the port and therefore contribute towards port profitability and employment. Furthermore, if port users make specialized and inherently immovable investments in a port, this helps to ensure their continuing use of it and their continuing contribution towards the port's revenues.

## IV. FINANCIAL CONTROL AND EVALUATION

### A. Financial control criteria

63. Port authorities will establish their financial control requirements in relation to their financial objectives and targets. Basically after the project has been accepted and a capital budget has been prepared, the control function will assure that expenditure is as budgeted and that revenue generated is according to expectations. The evaluation process of a capital investment project is composed of three phases: the acceptance phase, the capital budgeting phase, and the implementation phase. These allow management to set priorities and control the investment. The acceptance phase defines the proposed

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[22] *Development of bulk terminals*, TD/B/C.4/292, 1985.

project, determines that it is consistent with the port's mission and goals, determines the level of risk associated with the project and sets a financial target (return on investment, cash flow) for the project.

64. The capital budgeting phase is made up of three steps: an in-depth analysis of the project justification (feasibility study, environmental impact analysis, engineering studies); an investment decision analysis (initial identification of capital requirements, determination of procurement and development options, quantifying risks, calculation of expected investment results); and a financial decision analysis which includes the preparation of the items given in the checklist of figure 2.

**Figure 2**
**Capital project evaluation checklist**

- Project description
- Business justification
- Consistent with missions and goals
- Need for port involvement
- Environment/community issues
- Economic impact
- Financial analysis
  - Capital resource requirements
  - Operating resource requirements
  - Financial performance
- Implementation plan
- Other issues
- Recommendation

Source: T.J.Dowd and C. Johnson, *Port capital investment decision-making: A process*, Port Management series, Washington Sea Grant, University of Washington, November 1991.

65. The implementation phase follows the acceptance of the project and it is incorporated into the port's capital budget. The project is put out for bids and with the construction bids in hand, a final determination of financial acceptability is made. The monitoring of construction change orders and cost overruns is essential to assure the project is completed within the established cost parameters.

66. For debt financing, a similar procedure is followed by the multilateral banks for loan appraisal (see box 5). While the procedure is time consuming, it assures that all aspects of the project have been considered and therefore the risk for the lender is minimized. A public port authority must be dynamic in the sense that it must constantly review the facilities it owns, the services it offers and the sources of revenue that it generates to allow it to adapt its facilities and services to the needs of the market. This approach will allow port authorities to be pro-active and minimize delays in the capital development procedure.

## B. Corporate plans

67. Financial control is developed within the context of port corporate policy and strategy. This can be set out in a corporate plan, produced both to inform - and obtain approval from - the Board of Directors; and also for internal purposes within the organization. To be really useful, such corporate plans will be set out on a year-by-year basis, covering a period, of say five years ahead and will be updated annually.

***Box 5***
***Loan procedure Inter-American Development Bank (IDB)***

*The IDB, like most development banks, follows a procedure for all project loans:*

*Identification Stage: This starts with an agreement between the Bank and a borrowing member country on an operational strategy and definition of investment priorities that the Bank aims to pursue to support the country's development needs. A profile is prepared which contains a brief description of the main objectives, possible components and issues involved in the operation for each identified project. This stage ends when the project profile is approved by the Bank's Programming Committee.*

*Preparation Stage: A more developed project profile is prepared with a further development of the operation's objectives, components, costs, justification, issues and institutional framework for its execution to take place. This stage is carried out by the borrower and ends with his formal presentation of the basic documentation supporting its loan application.*

*Analysis Stage: This stage starts with an analysis mission to discuss the documentation prepared, followed by preliminary negotiations of the possible loan conditions. Also a Bank designated Project Team carries out in-depth analyses of the technical, financial, legal, institutional, socio-economic and environmental aspects of the project.. The result of this stage is a Project Report for presentation to the Bank's Loan Committee.*

*Final approval stage: Final negotiations are carried out to determine the terms and conditions of the loan. A Loan Proposal is prepared for approval by the Bank's Board of Executive Directors. Once approved, a loan contract is signed by the borrower's authorities and the Bank's President.*

68. The port organization can be divided up into a number of businesses, and the corporate plan for each business includes targets related to financial performance. In broad terms, examples of items that may be specified under the financial requirements of a plan are as follows:

- Each business is to make an after-tax profit each year;
- The net retained profit of businesses in any year (excluding additional depreciation) is to exceed the costs of the corporate overhead in that year;
- No business is to maintain a debt which exceeds three times that business's operating profit for the previous year;
- Over the five year planning period, the total debt is not to exceed twice the organization's operating profit;
- The port should always have in place borrowing facilities (excluding short-term facilities) which exceed by a specified amount, its expected borrowing requirement for the next 18 months;
- No contract is to be let nor any commitment leading to expenditure made until the financial resources to fund it are in place or (if the contract/commitment spans a period beyond a certain number of months) are adequately planned;
- Any business which does not need a particular asset to achieve its plan is to transfer it to another core business if appropriate, or if not, to the property business.

## C. Business plans

69. Corporate plans are essentially developed by ports and other organizations for internal use, to help develop corporate policy and strategy. However, ports may produce a related type of document, a published business plan. As they are for publication, such documents must be much broader in their coverage. Business plans of this type are produced precisely in connection with the financing of port investment: their purpose being to provide financial interests with relevant information relating to planned or possible future developments in the port and thus helping to promote a continuing and positive attitude towards the port by such bodies.

## D. Budgets and financial control

70. Budgets and financial control obviously have a vital role in relation to port investment, and the computerized processing of revenue data, operating expenses and capital costs has become vastly easier. However, port investment decisions do not only rest on such data, but also on expected future traffic. For a port investment carried out on the basis of a specific long-term agreement with a major port user, forecasting revenues may be comparatively simple. However, for other types of port investment, factors such as increasing inter-port competition and changes in shipping and transport technology make patterns of port use less stable than in the past, and thus make forecasting more uncertain.

71. Against such a background, and especially in relation to potential port investment, ports should obviously make careful assessments of potential port traffic: assessments should not be made on a theoretical basis, but based on contacts with relevant shipping and cargo interests. Indeed, in considering traffic forecasts, ports are wise to be prudent. In fact, in relation to traffic forecasts, the need is to be sure that investments will be justified, and that may necessarily mean that ports have to take a pessimistic view of future growth. There is no shortage of significantly under-utilized port facilities around the world, and over-optimistic traffic forecasts can give rise to unwise investment.

72. In port organizations, there is likely to be both a need to ensure that investment decisions are based on appropriate assessments of requirements; and at the same time, a need to decentralize or delegate investment decision making. This is necessary to avoid overburdening a relatively small number of very senior personnel in a port organization. One way of achieving this is to delegate decision-making authority on port investment: for example, with authorization by board-level personnel only being required for large projects over a given amount; and with less senior personnel being given decision-making authority for less substantial projects. Furthermore, if a port organization owns a number of ports, it is also desirable to decentralize geographically, for example with individual port managers being permitted to authorize port investment decisions of up to a specific maximum cost. Indeed, at some ports there has been a growth of "business units", with their own budgets for particular activities. Such units would have authority to authorize investments up to a specified maximum cost.

73. In other words, if decision-making authority in relation to possible investment is delegated or decentralized, this may be on a "layered" basis, with all decisions on investment over a certain magnitude being made by the chief executive. If there is such a system, there may be a need from time to time to raise the maximum permissible magnitude of investment on which decision-making is decentralized/delegated to take account of inflation.

## E. Control of spending

74. When an investment project is authorized, it may become apparent that there is likely to be overspending during the construction phase, some justified and some not, over and above the authorized expenditure. Such overspending can arise for various reasons:

- Contractors have put in low quotations to secure business, and subsequently found scope to make charges for additional items;
- "After the event" claims by contractors, e.g. because of delays due to bad weather;
- Engineers may find additional requirements involving additional expenditure, a not uncommon situation in relation to civil engineering contracts;
- Port users may request additional features.

Because of such possibilities, there is a need to watch that expenditures do not exceed amounts that have been authorized plus contingencies; or at least, that if authorized expenditures are likely to be exceeded, early warning should be given before the event, to the chief executive, and/or by the chief executive to the port board of directors. Such additional expenditure needs to be authorized in writing to avoid any misunderstanding and possible litigation.

75. The general procedures described above relate to action before the investment is carried out, or while it is being carried out. There is also a need for internal auditors to back-check port investment expenditures, for example on projects in excess of a certain level of cost and also to back-check the totality of budgeted investment expenditures against actual expenditure.

## F. Post-investment evaluation

76. Port authorities, multilateral lending institutions and also national development funding agencies naturally have concerned themselves with the evaluation of past port investments in which they have been involved. Such institutions obviously wish to monitor past investments, to consider whether projects financed have succeeded in their objectives and to consider whether the benefits from such investments are commensurate with the project costs involved. Post investment evaluation by such bodies is likely to consider:

- The success of the investment in physical and construction cost terms;
- The success of the completed investment in marketing terms, in relation to the attraction/retention of port users and traffics;
- The financial success of the completed investment, in terms of its financial viability.

Multilateral international funding institutions and national development funding agencies may also wish to consider the socio-economic impact of port investments, in terms of their effect on economic development and employment in a region.

77. Port investment evaluation in financial and operational terms obviously can be very relevant for multilateral and national development funding organizations. Private sector organizations making port investments naturally will similarly wish to check back on their past investments: for any guidance that this may give them for future investment; and also as good management practice. The assessment of the socio-economic impact of port investments is much more difficult. Furthermore, without rejecting the potential relevance of considering socio-economic factors, it is also important that any such consideration should take into account economic realities. For example, attempts to maintain high levels of employment while adapting for the containerization of cargo will eventually fail.

78. In any case, port investment is carried out for various reasons, not necessarily primarily relating to the financial viability of a particular investment. Decisions as to appropriate objectives for public sector investment must be left to governments, and in practice, the pressures on the availability of investment resources is increasingly concentrating the attention of governments as well as of port organizations on issues of financial viability.

## V. CONCLUSIONS

79. Financing port development is still one of the major issues facing port management worldwide. Globalization of trade and transport and the technological changes in sea and land transport mean that development schemes involving substantial amounts of funding will be needed in ports in the coming years.

80. A number of countries are now funding port developments by a mixture of public and private finance, notably in those countries undertaking the transfer of activities from the public to the private sector. Therefore, the relevant parties are the port authority and, increasingly, the port operators. Foreign direct investment is playing an important role, notably through a limited number of large stevedoring and cargo-handling companies which have now become international and act, often through joint-ventures with local partners, as port operators. Other countries continue to use multilateral sources which emphasize the role of ports in economic development.

81. Port authorities are and will continue to be the focal point for development schemes. To be able to have access to private finance, they need to adhere to sensible financial objectives and targets, to publish regularly independently audited financial reports, to maintain a proper general and analytical accounting system, to conduct periodic assessments of the tariffs and to maintain a good quality of service.

82. Governments should allow port authorities to seek alternatives sources of finance that are consistent with overall governmental objectives. Financing arrangements used in some countries, such as innovative self-financing or the use of bonds, could also be useful in others. Governments having a poorly defined policy for their ports, such as those existing in some countries in transition, should make an effort to define their policy and reinforce the financial management of the port authorities so that they will be able to undertake the necessary development schemes.

83. Development schemes should be appraised, implemented and controlled by the port authority following well established and tested procedures such as those used by the World Bank Group and other specialized lending institutions.

84. The financial management of ports goes beyond the issues connected with the financing of development schemes. UNCTAD could help port authorities by preparing a comparison of financial practices in several regions. Some areas of interest to consider for future work would be to review port authority financial reports, to review port accounting systems, to review financial indicators, to review the financial relations between port authorities and governments and to prepare a roster of international port operators.

## Annex
## GLOSSARY OF INVESTMENT TERMS

The following description of terms is meant to be used as a guide to financial and brokerage terminology. It should not be considered a comprehensive listing of all terms used in the financial world.

**American Depository Receipts (ADRs)**: Receipt for the shares of foreign based companies which are held in United States banks and sold in the United States market. Also known as ADSs -- American Depository Shares.

**Asset**: Anything having value that is owned by an individual, institution, or business.

**Asset valuation**: Method to determine the value on an asset. There are two main methods: historical value based on purchase cost less depreciation and economic based on either the market value or the replacement cost.

**Bond**: A debt security that is usually issued by government agencies, municipalities, and corporations. The purchaser actually lends the entity money and so is considered the creditor. The entity is the seller and is considered the debtor or issuer. The issuer agrees to repay the principal amount of the loan at a specified time (maturity). Interest bearing bonds pay interest periodically at a predetermined time. A discounted bond such as a Zero Coupon bond pays no interest. It is sold at a discount from face value and the investor receives a rate of return through price appreciation and the bond is redeemed at face value. Bonds tend to be purchased by long term institutional investors, who are risk averse, and will generally only provide funds to blue chip companies, preferring those with a credit rating.

**Book Value**: The value at which an asset is carried on a balance sheet. Normally, the asset is calculated as actual cost less allowances for depreciation. Book value may be more or less than market value.

**BOT (build-operate-transfer)**: Typically a private party (or consortium) agrees to finance, construct, operate and maintain a facility for a specific period and then transfer the facility to a government or other public authority. A variation is the **BOO (build-own-operate)**, where the contract accords the right to construct and operate the facility, but the facility is not transferred to the public sector.

**Common stock**: A security representing ownership in a company. Stock holders actually own part of the corporate assets and so share in the profits and losses. Voting shareholders have the right to attend annual meetings and voice opinions on the general operations. Many shareholders have the right to elect the board of directors, and vote on important changes within the organization. Many companies pay annual dividends. Bond holders on the other hand are simply creditors with no ownership privileges.

**Compound Annual Interest**: Interest on principal plus previous interest. For example, if you invest $1,000 at 10% for 5 years, you will receive $1,100 at the end of the first year, and that $1,100 is now the basis for the 10% interest for the second year and so on. At the end of 5 years, you have accumulated $1,610.51. If compounding monthly, the total would be $1,645.28. The shorter the compounding period, the greater ending value.

**Concession**: An arrangement whereby a private party leases assets for service provision from a public authority for an extended period and has responsibility for financing specified new fixed investments during the period, the assets revert to the public sector at the expiration of the contract.

**Corporate financing**: Although finance may be ostensibly provided for a project, lenders look to the cash flow and assets of the whole company or corporation to service the debt and provide security.

**Debt-Equity Ratio**: Total liabilities divided by total shareholder equity. This ratio gives an indication of how much equity would be available to pay off creditors in a liquidation situation. The higher the ratio, the higher the debt level. For example, a ratio of 3:1 indicates that the debt level is 3 times the value of the equity in the firm.

**Debt Financing**: A method used for financing where funds are borrowed from a bank or from investors in the form of bonds and for which a repayment schedule is agreed for principal and interest.

**Depreciation**: The loss in value of an asset over an accounting period. Different methods of depreciation include the straight line method, the accelerated method and the replacement cost method. In economic terms it may be due to adverse market conditions. In general business, it may be due to physical damages, obsolescence or other outside factors.

**Discounted Cash Flow**: A method used to estimate the present value of future earnings or cash flows.

**Equity**: Long term capital provided in the form of shares, signifying part ownership of the company. Equity holders receive dividends and capital gains (or losses), based on net profits. Equity holders take risks (dividends are not paid if the company makes losses), but in return share in profits.

**Equity financing**: The use of equity (shares) to finance the development of facilities.

**Internal Rate of Return -- IRR--**: A discount rate at which the present value of future cash flows equal the cost of the investment. When the IRR is greater than the required return, the investment presents a good opportunity.

**Investment Grade**: Term used in bond rating. It indicates that the bond is suitable for prudent investors. Fiduciaries often need to maintain credit quality levels and tend to buy mostly investment grade level debt.

**Initial Public Offering --IPO--**: The issuance of new stock by a corporation. A prospectus must be delivered to each investor before or at the time of sale. A "hot new issue" is an IPO that is in great public demand. There are not enough new shares to go around. Once the issue is initially priced, the stock usually jumps dramatically in price or sells at a premium to accommodate the demand.

**Liability**: Money owed to short-term or long-term creditors.

**Lease Financing**: A financing method used for financing major equipment whereby the user or lessee of the equipment pays an annual fee to the owner who may be a bank, the equipment manufacturer or leasing company.

**Mortgage**: Long-term loan secured on a specific fixed asset.

**Municipal Bond**: A debt instrument issued by a state or local government. The interest is exempt from federal income taxation, and also exempt from federal and local tax in the issuing state. There are generally two types: General Obligations -(GO) and revenue bonds. GOs are backed by the full faith and credit of the taxing power of the issuer and revenues are backed by the particular revenues or incomes from the project.

**Operating Expense**: The amount paid for asset maintenance or the cost of doing business. Corporate and fund earnings are distributed after deducting for operating expenses.

**Price Earnings Ratio**: Stock price divided by last year's earnings. The P/E indicates how much the stock owner pays per dollar of earnings that is generated by the firm on each share. As a generality, the higher the P/E ratio, the more risky and volatile a stock. The term is also associated with high growth stocks.

**Project financing**: The lender looks to the project's cash flow to repay the debt, and to the project's assets for security.

**Retained Earnings**: The net profits reinvested in the business after dividends are paid.

**Revenue bond**: Bonds secured against a project's cash flow and assets rather than those of an established company. Purchasers require a high level of confidence in the project.

**Required Rate Of Return**: For a given level of risk, the return required by investors. If the investor needs an annual return of 10%, but the asset only pays 7%, the investment would not be a wise choice.

**Risk**: The possibility that an investment will not perform as anticipated. An acceptable degree of risk must be determined by the individual with the understanding that the higher the expected return, the greater the risk factor. There are many different kinds of risk, such as exchange, inflation, interest rate, liquidity, political, etc. Most investors are considered to be risk adverse. That is they seek security over risk.

**Shareholders' Equity**: Total assets less total liabilities. Also called net worth.

**Syndicate**: A joint venture formed to undertake a project that individuals would be unable to or unwilling to pursue. Syndication is the method of selling interests to investors. Most new issues are distributed by a syndicate comprised of investment banking firms and/or broker-dealers.

**Tender Offer**: Public offering by a corporation to purchase shares from the investors at a specified price.

**Time Value Of Money**: The concept that money available today is worth more than that same amount in the future because of its potential earning capabilities now.

Source: Prepared by the UNCTAD secretariat and based on the INVESCO Glossary of Investment Terms (Internet, http://www.invesco.com/text/nvc53.html).